School of Computing and Information Systems
The University of Melbourne
COMP90049 Knowledge Technologies (Semester 1, 2019)
Workshop exercises: Week 9

1. What is **Machine Learning** (or **Data Mining**) and why is it a **Knowledge Technology**? Why has this field become important? Contrast the use of data/information/knowledge/wisdom with the way we have used them previously in this subject.

2. An urn initially contains 10 red balls and 6 black balls. At each trial, a ball is selected from the urn, its colour is noted, and then it is returned to the urn with 2 more balls of the same colour.

   (a) Compute the probability of obtaining a red ball with both the first and second trials

   (b) Show that the events "red ball on the first trial" and "red ball on the second trial" are **not** independent

3. Revise the definition of **data mining**. Name the main modes of data mining, and give an example of a task for each one.